Claims:

1. A frequency-hopping wireless communication system, the frequency-hopping wireless communication system using at least two different bandwidth hops at frequency-hopping center frequencies, low bandwidth hops and high bandwidth hop, wherein more center frequencies are available for use for the low bandwidth hops than by the high bandwidth hops.

2. The frequency-hopping wireless communication system of Claim 1 wherein the high bandwidth signal defines a first bandwidth range and wherein there is only one possible high bandwidth center frequency within the first bandwidth range and multiple possible low bandwidth center frequencies within the first bandwidth range.

3. The frequency-hopping wireless communication system of Claim 1 in which a pseudo-random sequence generator is provided at a transmitter and a receiver.

4. The frequency-hopping wireless communication system of Claim 1 wherein the same pseudo-random sequence generator is used for both high and low bandwidth signals.

5. The frequency-hopping wireless communication system of Claim 4 wherein a certain pseudo-random sequence generation value corresponds to a different low bandwidth frequency center than high frequency bandwidth center.

6. A frequency-hopping wireless communication system, the frequency-hopping wireless communication system using at least two different

bandwidth signals at frequency-hopping center frequencies, low bandwidth hops and high bandwidth hops, wherein a high bandwidth hop defines a first bandwidth range and wherein there is only one possible high bandwidth center frequency within the first bandwidth range and multiple possible low bandwidth center frequencies within the first bandwidth range, the low frequency bandwidth hops at the multiple possible low bandwidth center frequencies not extending out of the first bandwidth range.

7. The frequency-hopping wireless communication system of Claim 6 wherein the high frequency bandwidth is an integer number of times larger than the low bandwidth signal.

8. The frequency-hopping wireless communication system of Claim 6 wherein a pseudo-random sequence generator is provided at the transmitter and receiver.

9. The frequency-hopping wireless communication system of Claim 8 wherein the sequence value which indicates one of the possible low bandwidth center frequencies for a low bandwidth hop also indicates the one possible high bandwidth center frequency for a high bandwidth hop.

10. The frequency-hopping wireless communication system of Claim 6 wherein there are multiple bandwidth ranges within the spread spectrum band, each bandwidth range allowing one possible high bandwidth center frequency.